

Title (en)

CARRIER CARBON MATERIAL FOR SOLID POLYMER FUEL CELL AND CATALYST

Title (de)

TRÄGERKOHLENSTOFFMATERIAL FÜR EINE FESTPOLYMER-BRENNSTOFFZELLE UND KATALYSATOR

Title (fr)

MATÉRIAU DE CARBONE DE SUPPORT POUR PILE À COMBUSTIBLE À POLYMÈRE SOLIDE ET CATALYSEUR

Publication

**EP 3276717 A1 20180131 (EN)**

Application

**EP 16768350 A 20160303**

Priority

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- JP 2016056657 W 20160303

Abstract (en)

A support carbon material able to support a catalyst metal in a highly dispersed state and resistant to the flooding phenomenon and with little voltage drop even at the time of large current power generation under high humidity conditions and a catalyst using the same, specifically, a support carbon material for solid polymer type fuel cell use comprised of a porous carbon material which has a pore volume and a pore area found by the BJH analysis method from a nitrogen adsorption isotherm in an adsorption process of a radius 2 nm to 50 nm pore volume V A of 1 ml/g to 5 ml/g and a radius 2 nm to 50 nm pore area S 2-50 of 300 m<sup>2</sup>/g to 1500 m<sup>2</sup>/g and a ratio (V 5-25 /V A ) of radius 5 nm to 25 nm pore volume V 5-25 (ml/g) to said pore volume V A (ml/g) of 0.4 to 0.7 and a ratio (V 2-5 /V A ) of radius 2 nm to 5 nm pore volume V 2-5 (ml/g) to the same of 0.2 to 0.5 and a catalyst using the same.

IPC 8 full level

**H01M 4/86** (2006.01); **B01J 23/42** (2006.01); **B01J 32/00** (2006.01); **B01J 35/10** (2006.01); **C01B 32/336** (2017.01); **H01M 4/90** (2006.01); **H01M 4/92** (2006.01); **H01M 8/10** (2016.01)

CPC (source: EP US)

**B01J 23/42** (2013.01 - US); **B01J 35/60** (2024.01 - US); **C01B 32/336** (2017.07 - EP US); **C01B 32/342** (2017.07 - EP US); **H01M 4/86** (2013.01 - EP US); **H01M 4/90** (2013.01 - EP US); **H01M 4/9083** (2013.01 - EP US); **H01M 4/92** (2013.01 - EP US); **H01M 8/10** (2013.01 - EP US); **H01M 8/1004** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Designated contracting state (EPC)

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